



**PROGRAM** : NATIONAL DIPLOMA  
*ENVIRONMENTAL HEALTH*

**MODULE** : OCCUPATIONAL HEALTH AND SAFETY II

**CODE** : OHS 21-1

**DATE** : PRAC SUPPLEMENTARY EXAM, JANUARY 2018

**DURATION** : 2 Hours

**PAGES** : 2 Pages

**TOTAL MARKS** : 90

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**EXAMINER** : MRS. E. MAKANZA

**MODERATOR** : MR. T. MBONANE

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**INSTRUCTIONS TO STUDENT**

1. ANSWER ALL QUESTIONS
  2. READ YOUR QUESTIONS CAREFULLY. YOU WILL BE PENALIZED IF YOUR ANSWERS ARE NOT PROPERLY STRUCTURED AND NUMBERED.
  3. NO CELLPHONES TO BE USED AS CALCULATORS
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### **QUESTION 1**

- 1.1 What is the name of the SANS code that guides Occupational Hygienist when conducting Illumination surveys? (1)
- 1.2 List the 13 points that must be included in the illumination survey reports. (13)
- [14]**

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### **QUESTION 2**

- 2.1. Discuss the ionization process in fu. (5)
- 2.3. Exploration Geologists have been working in the field for 5 days and some of them are begging to show signs of extreme fatigue. Outline/Give common signs that prove heat stress exposure. (6)
- 2.4. Man is a warm-blooded animal referred to as homoeothermic; he must maintain his body heat despite the changes in the environment. What are the thermal stresses factors influencing heat loss or gain? (10)
- 2.5. For the following situations, determine whether or not the workers are overexposed. Motivate your answers with reference to the relevant legislation:
- In a bakery, where the air temperature is 25,9°C, the natural wet bulb temperature is 16, 8°C and the globe temperature is 30, 7°C. (5)
- 2.6. Mine workers in an open cast mine where the air temperature is 34<sup>0</sup>C, the Natural wet bulb temperature is 28,6<sup>0</sup>C and the Globe temperature is 23,9<sup>0</sup>C. (5)
- 2.7. Mine workers where the air temperature is 38 <sup>0</sup>C, the Globe Temperature is 40 <sup>0</sup>C and the natural wet bulb temperature is 30, 8 <sup>0</sup>C. (5)
- 2.8. Workers repairing roads in the summer, where the air temperature is 29, 1°C, and the globe temperature is 33, 1°C and the natural wet bulb temperature is 24,0°C. (5)
- 2.9. Overnight security guard, where the air temperature is 3°C, the globe temperature is 0°C and the natural wet bulb temperature is 2, 1°C. (5)
- [41]**

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### **QUESTION 3**

- 3.1 How would you recognize and identify a possible cold area (10)
- 3.2 Describe how different dosimeters work in monitoring personnel in the case of ionizing radiation. (8)
- 3.2 What is oxygen saturation at sea level, 7000m, 10 000m (3)
- 3.3 As researcher working with difference machines that emit radiation, please discuss the control measures that you will put in place to protect yourself from radiation (14)
- [35]**

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**Total Marks:**

**90**